



Reavis High School

Statistics Curriculum Snapshot



Unit 1: An Introduction to Analyzing Statistical Data

20
Days

Students will distinguish between quantitative and categorical variables. Students will also understand the concept of a population and the reason for using a sample and distinguish between a statistic and a parameter. Finally, students will be able to create a survey using Google forms, and apply simple descriptive statistics (mean, median, and mode) during analysis of results. They will also be able to make statements about survey results that can be defended using statistical analyses in Microsoft Excel.



Unit 2: Visualizations of Data

22
Days

Students will use data from their own created surveys to make frequency tables and form a histogram, a relative frequency histogram, and a frequency polygon. Students will also identify the histogram distribution shapes as skewed or symmetric and understand the basic implications of these shapes. In addition, students will identify and translate the data to and from a bar graph and a pie graph, a dot plot, a stem-and-leaf plot, a scatterplot, and a line graph.



Unit 3: Compass Review - Pre-Algebra

7
Days

Students will review and master mean, median, and mode and how to find them on a small data set without the aid of technology. Students will also review fractions, decimals, and percentages as well as integers, exponents, square roots, and scientific notation in preparation for the Compass and entrance exams.



Unit 4: An Introduction to Probability

24
Days

Students will be capable of listing simple events and sample spaces and know the basic rules of probability. Students will also be able to calculate the probability of occurrence of two (or more) simultaneous events. In addition, students will be able to create a pricing model that generates a profit for an insurance company; calculate simple conditional probability; evaluate the effectiveness of the pricing model; make decisions based on probability.



Unit 5: Compass Review - Algebra

10
Days

Students will review and master basic operations/factoring polynomials as well as setting up equations and substitution. Students will also review linear equations with one or two variables, radicals, and rational expressions in preparation for the Compass and entrance exams.



Unit 6: Discrete Probability Distribution

24-26
Days

Students will be able to distinguish between the two types of random variables: continuous and discrete. They will also be able to use discrete random variables to solve probabilities of outcomes. Students will also be able to calculate a distribution of probabilities and standard deviation of a series of data; evaluate the data to make pricing decisions; conduct research on meals and meal pricing



Unit 7: Compass Review - College Algebra

10
Days

Students will review and master matrices (basic operations, equations, and determinants) as well as arithmetic and geometric sequences and series. Students will also review functions and complex numbers in preparation for the Compass and entrance exams.



Unit 8: Normal Distribution

15-20
Days

Students will identify the characteristics of a normal distribution as well as use the Empirical Rule (68-95-99.7 Rule) for normal distributions. Students will calculate a z-score to determine if a data set corresponds to a normal distribution. In addition, students will be able to calculate probabilities that correspond to left, right, and middle areas from a z-score table to analyze data in Microsoft Excel.



Unit 9: Compass Review - Geometry

10
Days

Students will review and master angles (complementary, supplementary, adjacent, and vertical) with emphasis on how to find them and the appearance of the shapes. Students will also review rectangles (area and perimeter), triangles (area, perimeter, and Pythagorean Theorem), circles (area, arcs, perimeter, etc.). Review topics will also include three-dimensional, hybrid, and composite shapes in preparation for the Compass and entrance exams.